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ABSTRACT

In an effort to demonstrate that open learning can be accommodated within existing funding mechanisms in British colleges of further and higher education, this paper discusses issues concerned with determining the cost of Flexistudy and open learning delivery systems. After a review of the difficulties of estimating precisely the costs of various forms of educational provision, the next sections provide a breakdown of expenditures for a large technical college, a discussion of the calculation of teacher costs and teacher time, and an exploration of the effects of providing resources to open learning that are comparable to those provided for regular classroom instruction. Next, costs and resources are estimated for a Flexistudy course, which involves "mark and comment" services for assignments, tutorial meetings, and counseling or tutorial assistance. Concepts such as notional weekly hours (i.e., the normal duration of a weekly class); target class size (i.e., the number of students agreed to represent an acceptable enrollment in an analogue class); and class contact equivalent are used to facilitate the comparison of open learning and regular instruction. Subsequent sections focus on other factors to be considered, including initial counseling services, dropout rates, program duration, the number of active students, student staff ratio, fee levels, facilities, administrative and clerical support, learning workshops, multi-media presentations, practical work, staff development, and learning materials. The final sections point out the cost advantages of open learning systems. (HB)

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# OPEN LEARNING - RESOURCE ALLOCATION AND CONTROL

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March 1982

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# OPEN LEARNING - RESOURCE ALLOCATION AND CONTROL

## Introduction

The characteristic of open learning systems which distinguishes them from traditional instruction is that they substatially modify the extent and nature of the link between student and teacher. The problems to which we shall address ourselves relate to the financing of such systems and to the provision of resources. The difficulty to be overcome is that all our resource allocation and control mechanisms are based on formulae founded on concepts of college attendance and of an instructional method using the lecture or the classroom lesson. In such formulae there is normally also a presumption of regular programmed meetings throughout the academic year or over the full period of the course.

2. There are several questions which have to be discussed - perhaps the central, most significant concern decisions as how to allocate staff to the support of open learning and how to account for it. We shall concentrate mainly on this tutorial support and defer consideration of the use of college staff in the preparation of open learning materials. We will consider the issues connected with fees and recoupment and with the provision of clerical support. By and large we hope to demonstrate that open learning can easily be accommodated within existing resource mechanisms.

## Costing

3. Before we turn to detailed questions it is necessary to examine some of the issues concerned with the costing of various forms of educational provision. There is a widely held belief that activities can be costed precisely and that the provision of cost information renders decision making clear and precise. In fact costing is hedged about with all sorts of uncertainty and involves many assumptions. Anyone attempting costing has always to ask who is going to use the information and for what purpose. Our purpose is to assist those responsible for allocating resources by providing information on which comparisons can be undertaken. We are not for the present concerned with the cost of a course to a student, to his parents or to an employer. We shall be talking about costs to be set against local authority funds. Because of uncertainties about income, course costs or student unit costs are by convention always expressed in terms of gross costs taking no account of fee or other income.

## Teaching Salary Costs

4. A guide to further education costing comes from an analysis of the gross expenditure of a college. The breakdown which follows is for a large technical college and is under the headings which are recommended to facilitate comparisons. The expenditure is the revenue expenditure from which debt charges have been omitted. Capital expenditure is always handled separately.

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| Employees | Teaching | 64% |
| | Non-teaching | 18% |
| Premises | | 8% |
| Supplies and Services | | 8% |
| Transport | | - |
| Establishment costs | | 1% |
| Agency Services | | - |
| Miscellaneous | | 1% |
| | Total | 100% |

The outstanding characteristic is that in colleges the bulk of the expenditure is on employees which accounts for between 75 and 85% of the annual budget. Teaching salary costs range from perhaps 55% in a polytechnic to 70% of the total in a college of further education. For this reason the primary focus is always on teaching salary costs. What is done is to determine the total teaching salary costs of a department (or comparable unit) and to determine over the same period the total output of timetabled contact hours by that group of staff. The results of such calculations, adjusted to allow for the remainder of the costs show that the total cost of one hour of teaching may range from perhaps £20 for low level work in a college of further education to about £45 for high level work in a polytechnic.

5. Appendix 1 outlines the steps in a simple cost calculation and also provides an example of an approximate method. This calculation yields a total cost per teacher hour of about £23. Useful as this figure may be we have to appreciate its limitations. It does not follow that reducing the college timetables by 1,000 hours will save £23,000. Nor does it follow that it necessarily costs 75 x £23 = £1725 to mount an extra evening class of 2½ hours for 30 weeks. The actual salary cost might, with part-time staff, be as low as £6.80 per hour. We might have to add a little for extra heat and light and perhaps take a share of overtime for caretakers but at a cost of £7.50 per hour the extra evening class would cost 75 x £7.50=£563.00. Which of these costs do we use if we mount that evening class? The answer is likely to be that in general fees are not directly related to costs. Therefore those who try to insist that open learning courses are to be run "at full cost" or "at an economic rate" have to define very carefully what is meant by this. They have also to recognise that there are very few cases in which fees do match costs. A cost of £23 per teaching hour for an enrollment of 15 gives a rate of £1.53 per student hour and this about the order of what we charge for low level work to those that pay 'full cost'.

Teacher Time

6. Having made the point that considerations of cost do not lead to any great clarification as to what fees should be charged we can make one point which is that although teaching cost is not a reliable unit we can draw valid conclusions based on considerations of teacher time expended. Clearly the only way in which we can do this is by comparison of courses which are broadly similar in outcome. This



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will prove to be a useful if not infallible guide. Thus for example if we look at FlexiStudy we find that the majority of its present provision is for single GCE 'O' and 'A' level subjects for mature students. Such students attending college normally attend a single session class, generally in the evening only mode. Thus when we come to calculate resource provision we have an analogue as a guide. Within a given college or authority we shall be able to identify the normal provision to a single subject evening class, although there is no uniformity of provision between the many LEAs. The wide variation of provision makes it very difficult to produce solutions to resource problems which are of universal application. Fortunately there is a trend towards standardisation in England and Wales as local authorities move towards standardisation of attendance hours for recoupment purposes.

7. In arriving at the idea of a conventional course analogue of an open learning course we have established an equivalence of learning aims. We now have to explore the effects of a comparable resource provision in the support of open learning. If we focus on a FlexiStudy course with wide possibilities in the quantity and type of tutorial support we are likely to be able to derive resource solutions for other open learning situations. In FlexiStudy as in many open learning systems the main tutorial activity is focused in the "mark and comment" service provided for the tutor-marked assignments. In addition there will be the conduct of tutorial meetings, regularly or on an ad hoc basis. There may also be counselling or tutorial assistance provided in face-to-face meetings or by telephone. In pilot stages some colleges have funded tutorial support by paying a fixed rate for each assignment marked and paying for tutorials at part-time rates. As an alternative a tutor could be paid an agreed fixed sum for each student supervised. Such schemes have worked well for small scale operations but present some difficulties as the number of students increases. In the long run we have to accommodate open learning within existing systems of staff allocation.

8. We will now explore the question in detail based on the assumptions:

   a) that we can identify one or more analogues and that we select the most economical in expenditure of teacher time.

   b) For a group of FlexiStudy students we will provide a level of teacher support comparable to that provided for students following the analogue course.

The first thing we do is to agree for the open learning course what would be the normal duration of the weekly class - we call this the NOTIONAL WEEKLY HOURS. Suppose for example that we look at a GCE single subject O level course - we might set the notional weekly hours at 2½ and our resource provision would be based on 2½ hours of teaching contact. In normal classes all the students are present at the same time while in the open learning situation the major contact is on an individual basis through the assignment marking. As far as the support of students is concerned it is advisable to cater for the maximum possible flexibility and not try to specify in detail how the tutor is to allocate his time, this will depend upon the needs of individual and groups of students and upon the

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subject. We need to extend the analogue concept by defining a representative class size. This we call a TARGET CLASS SIZE - the number of students agreed to represent an acceptable enrollment for the analogue class. This would be rather more than the minimum enrollment which an authority would normally require, perhaps a suitable figure might be the average enrollment for classes of that type and level. Suppose we chose 20 students for our O level course.

9. To maintain resource comparability we have to allocate the $2\frac{1}{2}$ hours of teacher time between the individual students of our notional class of 20. On this basis each student's share of the teacher's time is $\frac{150}{20} = 7\frac{1}{2}$ minutes/week. We should thus require $\frac{60}{7\frac{1}{2}}$ = 8 students to equate to one hour of conventional class contact. This is called the CLASS CONTACT EQUIVALENT - the number of students whose supervision is agreed to be equivalent to one hour of class teaching contact.

$$\text{CLASS CONTACT EQUIVALENT} = \frac{\text{TARGET CLASS SIZE}}{\text{NOTIONAL WEEKLY HOURS}}$$

Many colleges have developed formulae which would, for example, replace one hour of conventional contact by supervision of between 6 and 10 students, two hours would be allowed for between 11 and 20 students and so forth. There are two elements in any staffing negotiation, the class contact equivalent and the arrangements for fractions of a contact hour. It is also usual to limit the total case load of a teacher so as to give him not more than one third of his work on FlexiStudy.

10. Although we have, to date, no supporting evidence, it is possible that the class contact equivalent will vary with the subject and level of work as well as with the design of learning material. In negotiating class contact equivalents there are two variables - the target class size and the notional weekly hours. Although only one variable is necessary at this point, and we could negotiate in terms of class contact equivalents there are other formulae which require notional weekly hours. We have above a class contact equivalent of 8, general practice tends to give a slightly lower figure and many colleges operate with a class contact equivalent of 6. This gives the teacher 10 minutes per week to spend on each student. A typical division of time might yield perhaps 5 minutes/week for assignment marking, if we assume an average of 1 assignment every 3 or 4 weeks we should have 15-20 minutes marking time for each assignment. The remaining 5 minutes/week would yield tutorials on a scale which depends upon the tutor's case load. With a case load of 12 students there is one hour each week available for tutorial. This might be allocated to provide a one hour group tutorial available to all 12 students every four weeks and six thirty-minute tutorials for individuals in the same period. We should also point out that only about two thirds of a teacher's contracted attendance (in England and Wales) is programmed to class contact, the remaining third is generally claimed to be available for preparation and marking. With open learning, marking assumes much greater importance and there is normally no preparation. Thus on the basis used above there are another five minutes per week available for each student. This could allow for unplanned telephone contact and for record keeping which in open learning is of great importance. It really is not profitable to pursue this time allocation much further. We can see what sort of time is available to provide similar resource allocations to the two forms of activity.

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Initial Counselling

11. There is a good deal of experience which suggests that the effectiveness of an open learning scheme can be substantially increased if care is taken to ensure that students have selected an appropriate course, that they understand the demands made by this form of study and are prepared to make a firm commitment. The pre-enrollment interview is often carried out by tutors with some degree of overall control of the scheme and with considerable interviewing experience. For a scheme aiming to enrol 100 students it would be prudent to be prepared to interview perhaps 150 with an average allowance of 15 minutes per student. This would equate to about the equivalent of one hour of class contact through a 36 week teaching year.

Wastage

12. Most authorities are concerned about wastage in open learning. It is generally recognised that there is a very high drop out rate in evening courses but most authorities monitor evening attendance and will close classes where attendance falls significantly. We know very little about FlexiStudy continuance patterns. There is liable to be some wastage between enrollment and the submission of a first assignment - this can be reduced by improving pre-enrollment counselling. The only evidence we have has been provided by Barnet College where approximately one third of the students complete courses in the first year, one third go on to a second year, very few indeed extend to a third year but one third drop out within the first year. Until a college has evidence of its own pattern of wastage the planning of staff allocations will present some problems. What is clear is that measures have to be taken to avoid substantial staff allocations to students who are no longer participating in the programme. The concept adopted is to provide staffing for active students only. The precise definition of an active student is a matter for local agreement. It would perhaps be agreed that a student who had not submitted an assignment for perhaps two months, had not attended a tutorial, and had not replied to enquiries should be removed from a tutor's case load. In theory at least, in those systems which allow enrollment throughout the year, there is a possibility of topping-up. It is probably necessary formally to review student progress once each term and to adjust staff loadings each term.

Duration of Programmes

13. One of the advantages of a FlexiStudy scheme is the ability to enrol at any time and for the student to be able to adjust the pace of his study to meet his own situation. In spite of this it is generally advisable to allocate a design length to each of the courses. This design length will be used to determine the fee structure. There will be many advantages in setting the design lengths approximately at one academic year. It is generally wise to place some limit on the college commitment to provide tutorial support in return for the course fee. An alternative is to allow support for a certain period in return for the initial fee but to make a renewal charge or second fee installment payable at the beginning of later years. (For enrollments in the Spring and Summer terms the initial fee might perhaps last for five or four terms respectively). The more clearly we recognise that there is very little connection between fees and cost the less concerned we shall be about the comparatively few students who take a very long time to complete.



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'Burnham Points' Count

14. We need to consider how to account for open learning students. The following are suggested:

a) Further Education Statistical Return - use number of active students at 31st October.

b) Burnham Points - use number of active students at 31st October and NOTIONAL WEEKLY HOURS. Note that the use of active student counts corresponds to the use of registered hours at 31st July for part-time students enrolled on conventional courses.

Student Staff Ratio

15. The problem here is to convert students and staff into part-time equivalents. Although this would normally be done over a complete year we can illustrate the principle on a weekly basis. Suppose we have notional weekly hours of 2.5, to convert this to full-time equivalents we divide by the average student hours of a comparable full-time course. At levels IV and V this figure would be about 27

$$\therefore \text{FTE of a single student} = \frac{2.5}{27} = .0926$$

Assuming that we have as class contact equivalent of 6 the teacher effort expended on one student is 1/6 hour. The conversion factor used at non-advanced level to convert part-time teaching hours to full-time equivalents is 21 hours per week.

$$\therefore \text{FTE of teacher commitment} = \frac{1}{6 \times 21} = \frac{1}{126} = .00794$$

$$\therefore \text{SSR} = \frac{.0926}{.00794} = \underline{11.7}$$

It is necessary to point out that the figure produced shows the potential SSR achievable by the system as specified. The actual SSR achieved might vary according to how teachers' actual case load of active student matches up to the design concept implicit in taking a class contact equivalent of 6.

16. The method outlined above derives an SSR on the basis currently used in England and Wales. There are figures in Scottish practice which could give different figures. If we take an evening-only equivalent student as 1/7 FTE and accept that in Scotland conditions of service might yield a figure of average lecturer hours for low level work as high as perhaps 24 hours/week.

$$1 \text{ student} = \frac{1}{7} \text{ FTE}$$

FTE of teacher commitment with class contact equivalent = 6

$$\text{is } \frac{1}{6 \times 24} = \frac{1}{144}$$

$$\therefore \text{SSR} = \frac{1}{7} \div \frac{1}{144} = \frac{144}{7} = \underline{20.6}$$

The difference in figures merely emphasises the crucial effect of the conversion factors and the care which must be taken in making comparisons.

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Fee Levels

17. We pointed earlier to the difficulties of trying to fix FlexiStudy fees at 'full cost' on 'economic cost'. We should have the same difficulty in fixing an evening course fee. For an evening course of 30 weeks at 2½ hours/week a full cost for the 75 hours would be about £23 x 75 = £1725. If we supposed an enrollment of 20 students we should have to charge £86 per student to recover that cost. In practice the fee is more likely to be near that derived for the other extreme of our costing exercise. 75 hours at £7.50 costs £563 and for 20 students we would have to charge £28 each.

18. A common practice is to charge for a FlexiStudy course the fee which would be charged for the comparable course in the evening-only mode. Many authorities add to this the cost of the course material which for O and A levels is in the approximate range £10 - £25, depending upon level and subject, a minority of colleges include materials for the evening course fee.

19. One or two colleges have tried to include an element to cover postage of the course materials and the assignments. Others have tried to provide an element to cover telephone costs. Given the actual possibilities of 'real' costs lying between £28 and £86 the actual costs of postage and telephone are not significant and are best excluded from the fee structure. Reasonable economy needs to be exercised in postage and both tutors and staff need to use the telephone appropriately. Students should be trained to prepare telephone questions so that they can be answered reasonably succinctly. Long telephone calls have to be avoided, not only on account of the expense but also to avoid congestion of College or special FlexiStudy lines.

Accommodation and Faciltities

20. By and large FlexiStudy makes no untoward demands on accommodation. The facilities which are required for pre-enrollment counselling and for single-student tutorials may need better conditions than exist in some lecturer work-rooms and it may be desirable to provide occasional access to small offices or tutorial rooms.

21. Depending on the scale of operation, the range of subject offerings and the methods employed for dispatch of learning material to the student, there will be a need for space in which material can be stored and handled. Some colleges like to hold a stock of material in order to follow up enrollment with an issue of the first batch of material. This clearly requires some form of holding account with appropriate stock holding and handling procedures.

22. Because of the need to provide telephone contact for students it is necessary to ensure that arrangements for leaving messages are adequate. For colleges making efficient use of the facilities available to them this should raise no problems. Some colleges provide a special line for FlexiStudy enquiries, some have a FlexiStudy answering machine.

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Administrative and Clerical Support

23. The level of administrative and clerical support provided by local authorities varies so widely that attempts to devise formulae of universal application have always been frustrated. The duties concerned here, are those involved in despatch of learning materials and marked assignments, with receipt and routing of assignments to the appropriate tutor, with message handling and with the keeping of records of student progress. The estimate provided in the Barnet Manual suggests an allowance of about 4 minutes per week for each FlexiStudy student. Some colleges are using a little less, perhaps 3 minutes per week for each student. With increase in student numbers and with experience FlexiStudy work tends to become more closely integrated with the total work of a department. The figure of 3 minutes per week per student is about the same as the median of a very wide range disclosed by a national study some years ago of the provision for non-advanced further education. This equates to about one post per 75 full-time equivalent students.

Learning Workshops

24. Our primary consideration was to resolve the provision of academic staff for FlexiStudy. FlexiStudy with its very variable mix of correspondence learning with formal and informal tutor contact, is probably the most difficult to resolve. The resolution depended on the identification of an analogue course and the definition of two quantities the Target Class Size and the Notional Weekly Hours from which it is possible to determine a Class Contact Equivalent. One case which may raise problems is that of the flexible learning workshop where open access is provided to students over a comparatively long working day. To the rather limited extent that such centres are, at present, operated, staffing problems have not arisen, largely because of the enthusiasm of the small groups of teachers who have initiated such schemes. The teacher-student contact in these cases involves no preparation, providing, as it does, an immediate and informal response to student requests for help. It may be necessary to negotiate special conditions for circumstances like these. The incidence of such centres is at present insufficient to provide information about the measurement of teacher input and student-taught outputs.

Multi-media Presentations

25. All our discussions so far has been concentrated on the resource provision for open learning systems which make use of material purchased from publishers or correspondence colleges. By and large we have assumed the use of printed material mainly because for the present it seems unlikely that we can find resources for the preparation of multi-media presentations. This is not to say that there will not be a number of special situations which would greatly benefit from special packages of tape or slide material. In most colleges it would be possible to provide facilities for students to use these or to view films or video recordings. What we are not able to contemplate yet is the deliberate fostering of a multi-media approach with the establishment of large numbers of student positions with comprehensive audio-visual facilities.

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Practical Work

26. There are a number of open learning courses which require access to supervised laboratory, workshop or computer facilities. We may be able to accommodate open learning students on an ad hoc basis in practical classes arranged for other students. Alternatively we might arrange for special laboratory meetings for open learning students. Much depends upon the requirements of the validating body and the extent to which practical work is mandatory.

Staff Development

27. Many teachers are uncertain about the demands to be made upon them when acting as open learning tutors. In fact, the skills required are no different from those required in conventional teaching. What is different is the relative distribution of skills. Overall the major emphasis occurs, not in the transmission of facts, concepts and ideas, as in normal teaching, but in maintaining student motivation. The primary communication, through marking and commenting on assignments, calls for the ability to write clearly and at the same time convey interest and concern for the progress of the student. Such personal contact as arises demands an informed but informal and flexible approach and a readiness to identify individual student problems. It is essential that tutors are thoroughly familiar with the detailed content of the learning material.

28. Teachers need to have an opportunity to study the learning material in depth but the main staff development requires an orientation to the characteristics of this form of instruction. Fortunately, suitable learning packages have been published which enable new tutors to study individually or in groups. A few hours of study should prove sufficient.

Cost Advantages

29. Our discussion so far has related to the provision of tutorial support for open learning schemes. By and large the modest levels of support we have proposed have not shown any cost advantage over for example evening-only study, indeed we have postulated that resource provision would be at about the same level for FlexiStudy and for evening classes. Although we have shown no advantage in student unit cost for groups of a size which would be considered viable for the operation of evening classes it is possible to carry the same costs to levels of student numbers which could not be considered for running an evening class. We have also extended opportunities to students who could not otherwise have participated because they cannot arrange to attend regularly. For many of this latter group of students and perhaps their employers the savings resulting from flexible systems may be very substantial.

Producing Learning Material

30. Our calculations have all been based on the assumption that there exists an adequate supply of suitable learning material. One of the major inhibitions to the extension of open learning systems has been the lack of validated material. The reason for this is to be found in the vast multiplicity of validating and examining bodies. The number of individual syllabuses covering susbstantially the same ground is generally so great that the number of students following any individual syllabus is insufficient to provide commercial incentives for the production of high quality learning material. Nor has any effort been available to undertake critical examination and comparison of the material which does exist.

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31. It is not possible to provide simple rules for estimating the costs of producing open learning material. Given a sound text book, the writing of a study guide and sets of test questions is often possible within the normal allowances for preparation negotiated in most conditions of service agreements. Many FlexiStudy tutors find it advantageous to replace or supplement some elements of the published material and do so without untoward expenditure of effort. By contrast, the preparation of material of the quality of that produced by the Open University involves costs of a very high order. In this case the payment to writers is swamped by editorial costs and the costs involved in extensive processes of review by educational technologists and subject committees. However providing there is a sufficient market for the material the per capita costs are modest. The writing, illustration, editing, initial printing and commercial distribution of a text-book or learning package for a single subject covering perhaps 75 hours of conventional study is currently of the order of £10,000. Assuming a life of five years before revision is needed and an annual intake of 200 students, the per capita cost is only £10. Unfortunately no single college is likely to be able to generate this size of population and we cannot seriously contemplate writing learning material for use by only one college.

32. There is a problem about cost which arises when we use full-time teachers for writing learning materials in that the hourly costs are very much greater than those which would normally be paid by commercial publishers. We earlier arrived at a cost of £23 per contact hour based on 19 hour/week of contact. Based on 30 hours attendance the teacher cost would be about £14.50 per hour. It is necessary to allow something like 5 hours of writing time to produce learning material to support 1 hour of study. The cost of writing a 75 hour package on this basis is 375 x £14.50, about £5400. This is far too high a figure for a package to be distributed at a cost of £10,000 So far publishing in support of further education and indeed the production of a lot of Open University material has been made possible by the spare time activities of further education teachers. It is possible that quite new circumstances will be met in extending the range of vocational materials. One of the functions of the present MSC 'Open Tech' operation may well be to fund the production of learning materials which could not be undertaken with present commercial constraints.

Conclusion

33. We have shown that although open learning systems drastically modify the extent and nature of the contact between teachers and students the support required by open learning students can easily be provided by most colleges. Further Education resource allocation formulae make no clear distinction between learning and teaching and in order to account for open learning students it is necessary to establish a basis for comparison with conventional courses. Once this basic accounting problem is overcome, open learning presents no particular difficulties.

Further Reading


BIRCH, D.W. and CUTHBERT, R.E. Costing Open Learning in Further Education, Council for Educational Technology, 1981.

BARNET COLLEGE FlexiStudy: a manual for local colleges (National Extenstion College Reports Series 2 No.4) National Extension College, 1980.

BIRCH, D.W. and LATCHAM, J. Accounting for Academic Staff Resources for the Support of Open Learning (Coombe Lodge Information Bank No.1605), Coombe Lodge, Further Education Staff College, 1981.

LATCHAM, J. Student Staff Ratio as a Performance Indicator (Coombe Lodge Information Bank No.1560), Coombe Lodge, Further Education Staff College, 1980.

LEWIS, R. How to Tutor in an Open Learning Scheme: Self Study Version, Council for Educational Technology, 1981.

LEWIS, R. How to Tutor in an Open Learning Scheme: Group Study Version, Council for Educational Technology, 1981.




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Appendix 1

## Further Education Costing

1. Most costing in further education is effected by determination of either the cost of one hour of teacher contact or upon the cost of one student hour.

2. To determine the cost of one teacher contact hour

   from the total college budget determine the ratio of direct costs to the total. As a first approximation it is usual to use teacher salary costs (including National Insurance and employer superannuation contributions) as direct costs. (At the next level of elaboration those costs such as technicians, consumable materials and departmental clerical staff would be included in direct costs).

3. Because of the effect on comparisons of different age and experience of academic staff it is usual to replace the actual costs of full-time academic staff by a calculation based on the numbers in each staff grade and the mid-points of the salary scales. Actual figures are used for part-time teacher salaries.

4. Determine the teaching staff costs for each department. Determine also the total contact hours produced during the year by these teachers.

5. Determine the direct costs of one contact hour

$$= \frac{\text{Total teaching salary costs}}{\text{Total teaching hours}}$$

6. Multiply this figure to achieve total teaching cost

$$= \text{direct teaching cost} \times \frac{\text{College total costs}}{\text{College teacher costs}}$$

7. From the figures so determined we can find the cost of one hour of teaching from each department of the college. A course cost is found by determining the teacher hours allocated to it from each department The cost per enrolled student on the course can be found by dividing course costs by enrolled student.

8. A number of approximate methods are available. For example

   a) Assume, for a department providing mainly low level work, that the average department salary is the top (point 15) of the lecturer/scale. £8658

   b) Enhance the salary by 18.5% to allow for employer's superannuation and national insurance contributions:- Direct cost = £8658 x 1.185 = £10260

   c) Assume that the ratio of teaching to total costs is 65% for the college.

   $$\text{Total cost} = £10260 \times \frac{100}{65} = 15{,}784$$

   d) Assume that the average timetabled contact for the department is 19 hours/week for 36 weeks = 684 hours

   e) Cost per teaching hour

$$15 = \frac{15874}{684} = £23.07$$

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